

ABSTRACT OF THE DISCLOSURE

A method of fabricating a graded index plastics material optical fiber whose refractive index varies between its center and its periphery comprises the following process steps: preparing at least two liquid compositions with different refractive indices, each composition comprising at least one polymer, a substance to vary the refractive index being present in at least one composition and a cross-linking starter being present in at least one composition, filling a preform formation system with the compositions, producing a liquid preform in the system, the refractive index of said preform having a given gradient, and drawing the preform to obtain a graded index plastics material optical fiber. The production of the preform comprises a step with substantially no flow of the compositions along the system.